

PUBLIC COMMENT ON PROPOSED REVISIONS TO THE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS

PROPOSED RULE; NOTICE OF PROPOSED AMENDMENTS TO NATIONAL STANDARDS FOR TRAFFIC
CONTROL DEVICES: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND
HIGHWAYS; REVISION
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May 14, 2021

Ms. Stephanie Pollack
Acting Administrator
Federal Highway Administration
1200 New Jersey Avenue, S.E.
Washington, DC 20590

Re: Law Professor Comments on Notice of Proposed Amendment of the Manual on Uniform
Traffic Control Devices (MUTCD)

Dear Acting Administrator Pollack:

Thank you for the opportunity to comment on the proposed amendment of the Manual on Uniform Traffic Control Devices (“MUTCD”). We are law professors who study transportation, land use, and economic growth,¹ and we write in our personal capacities, not as representatives of the institutions with which we are affiliated. We have several concerns about the proposed revision (“Proposed MUTCD”). We acknowledge that the Proposed MUTCD was initiated prior to the current administration of President Biden and Transportation Secretary Buttigieg. We are optimistic and hopeful that with a new administration focused on overall road safety, we can make some headway in reversing mistakes of the past, which are still unfortunately embedded in the Proposed MUTCD.

Every day, Americans entrust their lives to a road system that is governed by the MUTCD. Yet that system is unsafe—uniquely dangerous, in fact, when compared to our peer group of nations. This is true for Americans when they are in cars, and it is doubly true when they are not. Further, transportation emissions are now the number one source of greenhouse gases in the United States. These toxins, which principally consist of emissions from private cars, also cause environmental pollution and widespread health problems, including over 50,000 premature deaths a year.² And they cannot be eradicated through electric vehicles alone: over 90 percent of deadly, cancer-causing

¹ Among other work, see Gregory H. Shill, *Should Law Subsidize Driving?*, 95 N.Y.U. L. REV. 498 (2020); Sara C. Bronin, *Rules of the Road: The Struggle for Safety and the Unmet Promise of Federalism*, 107 IOWA L. REV. ____ (forthcoming 2021).

² *Sources of Greenhouse Gas Emissions*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions> (last visited May 14, 2021); see Fabio Caiazzo et al., *Air Pollution and Early Deaths in the United States. Part I: Quantifying the Impact of Major Sectors in 2005*, 79 ATMOSPHERIC ENV'T 198, 207 (2013) (finding 58,300 premature deaths annually in the United States attributable to auto pollution, with an estimated average loss of 12 life years per mortality).

particulate matter generated by cars in traffic come from non-exhaust emissions, such as tire wear and brake pads.³

It is no secret that U.S. transportation policy has historically favored driving—specifically, unfettered driving to and from all destinations—over all other modes and activities. But while Americans are car-loving by choice, we are car-dependent by law. The MUTCD is a leading example of these legal constraints on transportation behavior. It prioritizes drivers over other road users, contributing to a legal scheme that makes travel by other modes impractical or unsafe in most circumstances. The effect of the federal promulgation of the MUTCD is compounded, because it is adopted into state, local, and other sources of federal law and must be “in substantial conformance” with the MUTCD.⁴

Whatever the transportation mode, improving safety for all road users is essential for progress on economic prosperity, climate, and racial justice in the United States, yet the MUTCD undermines those bedrock goals. One need look no further than the past year for evidence of the dangers of our roads. Although driving dropped off sharply in 2020 during the pandemic, the year saw the highest roadway death rates on a per-mile-traveled basis in 96 years. The reason for this is that the lighter traffic allowed more reckless and faster driving. In other words, the accomplishment of the longstanding dream of traffic engineers—increasing flow, reducing congestion—proved to be deadly. The MUTCD embodies this vision and enshrined its design principles into law.

Unfortunately, the Proposed MUTCD would not address these failures. Instead, it would perpetuate some arbitrary, capricious, or discredited rules while introducing new ones that would carry over to the 21st century many of the failures of the 20th.

We call upon the Federal Highway Administration (“FHWA”) to scrap the current review process and conduct a full rewrite of the MUTCD. The new MUTCD should follow a scientifically sound, evidence-based approach that is grounded in modern transportation research and that prioritizes safety, access, and equity, and is informed by diverse stakeholders. Specifically, it must balance the longstanding engineering objective of maximum vehicular throughput against important public policy priorities, such as curbing the destructive economic and health impacts of wide roads on neighboring communities. It must also adopt rules of design that minimize rather than amplify the unique dangers that pedestrians are subjected to by speeding motorists.

Making the necessary changes to the MUTCD will take a considerable amount of time, but it should not remain fully in force during that rewrite. For reasons we describe below, **we also call upon the**

³ Victor R.J.H. Timmers & Peter A.J. Achten, *Non-Exhaust PM Emissions From Electric Vehicles*, 134 ATMOSPHERIC ENV'T 10, 14 (2016).

⁴ See 23 C.F.R. § 655.603(b)(1) (prescribing “substantial conformance”); *Manual on Uniform Traffic Control Devices (MUTCD): Overview*, U.S. DEP’T TRANSP., FED. HIGHWAY ADMIN., <https://mutcd.fhwa.dot.gov/kno-overview.htm> (last visited May 14, 2021) (asserting MUTCD’s status as “the law governing all traffic control devices” and noting that non-compliance “ultimately can result in the loss of federal-aid funds as well as in a significant increase in tort liability”); U.S. DEP’T TRANSP., FED. HIGHWAY ADMIN., FHWA-SA-16-076, SPEED LIMIT BASICS 2 (2017), https://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwasa16076/ (“State and local transportation agencies recommend and set appropriate speed limits by completing engineering speed studies and following the guidance presented in the MUTCD.”); *Who Uses the MUTCD? And How?*, U.S. DEP’T TRANSP., FED. HIGHWAY ADMIN., <https://mutcd.fhwa.dot.gov/kno-users.htm> (last visited Oct. 31, 2019) (“When a new edition or revision of the national MUTCD is issued, States have two years to adopt it, with or without a State supplement, or to adopt a State MUTCD that is in substantial conformance with the new edition of the National MUTCD.”).

FHWA to exercise its authority under the Administrative Procedure Act⁵ to issue an emergency rule withdrawing a method it sanctions for modifying speed limits, the 85th Percentile Method.

The reasons for our requests are set forth in this comment. The Proposed MUTCD leaves uncorrected the defects of the current MUTCD by:

- (1) Failing to protect the safety of people outside the car,**
- (2) Allowing the deadliest drivers to police themselves,**
- (3) Prizing rigid national uniformity over local flexibility and innovation,**
- (4) Privileging a narrow engineering perspective over diverse expert and community opinions, and**
- (5) Subordinating public safety to unproven technology.**

(1) The Proposed MUTCD Fails to Protect the Safety of People Outside the Car

The Proposed MUTCD states that its purpose “is to establish national criteria for the use of traffic control devices that meet the needs and expectancy of road users on all streets, highways, bikeways, and site roadways open to public travel.”⁶ But the pages that follow interpret “road users” to be primarily drivers of automobiles.

This interpretation all but guarantees that the Proposed MUTCD does not make the road safe for all users. The draft promotes fast vehicle travel, but other goals, such as access to destinations by pedestrians or other road users, are subordinated to the needs of automobiles.

A few examples illustrate this point. To install crosswalks, for example, the Proposed MUTCD places too much emphasis on preventing the slowing of vehicular traffic. In addition, the Proposed MUTCD leaves in place the guidance that “crosswalk markings should not be used indiscriminately” and that an engineering study must be done, making it difficult and expensive to install new crosswalks.

The next version of the MUTCD should use tools and language that prioritize pedestrians, even if it impacts car travel or reduces the over-engineering required by the current MUTCD. The same priority should be given to bicyclists and any other vulnerable road users, resulting in a set of more balanced and less auto-centric regulations.

(2) The Proposed MUTCD Lets the Deadliest Drivers Police Themselves

(a) The 85th Percentile Method Should be Stripped Out of the Proposed MUTCD

Unique among federal regulations, the MUTCD explicitly authorizes those who break the law to rewrite it. And not just any law, but an essential law of public safety: the speed limit.

The MUTCD details methods for establishing and reevaluating speed limits. Specifically, it prescribes setting the speed limit at or below the speed at which 85 percent of vehicles are traveling “in free-

⁵ See 5 U.S.C. § 553(b)(3)B).

⁶ Proposed MUTCD § 1A.01.

flowing traffic” *regardless of the posted speed limit*.⁷ This method, known as the 85th Percentile Method or Operating Speed Method, permits the most reckless fifteen percent of drivers trigger an increase in the speed limit simply by breaking it. The 85th Percentile Method establishes a one-way ratchet whereby speed limits are raised in order to accommodate a dangerous group of lawbreakers, then violated again and raised again. Moreover, the FHWA has made it harder to reduce speed limits, even in situations where the roadway hazards and scientific analysis crash data prove the street is dangerous.⁸ The Proposed MUTCD does not merely repeat this prescription; it elevates it from an “Option” to “Guidance,” giving it a higher priority.⁹

Giving the 85th Percentile Method this elevated status—or keeping it at all—is simply not well-supported by relevant research. In 2012, the FHWA admitted as much, observing that “[t]he original research between speed and safety which purported that the safest travel speed is the 85th percentile speed is dated research and may not be valid under scrutiny.”¹⁰ The FHWA has stated that often “the 50th percentile operating speed is either near or exceeds that posted speed limit,” so establishing the speed limit at the 85th Percentile level is almost certain to result in higher speeds.¹¹

Many other agencies and experts have criticized the 85th Percentile Method’s lack of scientific foundation and proclivity to increase traffic violence. The NTSB, for example, has warned that “[r]aising speed limits to match the 85th percentile speed can result in unintended consequences,” including “higher operating speeds, and thus a higher 85th percentile speed.”¹² Further, the NTSB called into question the scientific basis of the method and recommended alternative methods, in particular ones that are sensitive to crash history and pedestrian danger.¹³

Though sanctioned by the MUTCD, the 85th Percentile Method is anathema to the rule of law. Rather than enhancing predictability, stability, or fairness in administration, it empowers the law-breaking minority to trigger an opaque administrative process that results in a change in the law. The 85th Percentile Method is perhaps unique in American law in empowering lawbreakers to rewrite the law to legalize their conduct. Given that speed is a leading factor for deadly crashes, this arbitrary and capricious method has serious real-world consequences.

(b) The FHWA Has Good Cause to Rescind the 85th Percentile Method via Emergency Rulemaking

The FHWA should rescind the 85th Percentile Method and make clear that government agencies that rely on it are not acting in conformance with the MUTCD.

⁷ MUTCD § 2B.13-12.

⁸ U.S. DEP’T TRANSP., FED. HIGHWAY ADMIN., FHWA-SA-12-004, METHODS AND PRACTICES FOR SETTING SPEED LIMITS: AN INFORMATIONAL REPORT 13 (2012), https://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwas12004.

⁹ Proposed MUTCD § 2B.21.

¹⁰ U.S. DEP’T TRANSP., FED. HIGHWAY ADMIN., FHWA-SA-12-004, METHODS AND PRACTICES FOR SETTING SPEED LIMITS: AN INFORMATIONAL REPORT 12 n.* (2012), https://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwas12004/.

¹¹ *Id.* at 13 (2012), https://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwas12004.

¹² See NAT’L TRANSP. SAFETY BD., NTSB/SS-17/01 PB 2017-102341, SAFETY STUDY: REDUCING SPEEDING-RELATED CRASHES INVOLVING PASSENGER VEHICLES, at x (2017), <https://www.nts.gov/safety/safety-studies/Documents/SS1701.pdf>.

¹³ See *id.* (“In general, there is not strong evidence that the 85th percentile speed within a given traffic flow equates to the speed with the lowest crash involvement rate for all road types. Alternative approaches and expert systems for setting speed limits are available, which incorporate factors such as crash history and the presence of vulnerable road users such as pedestrians.”).

The 85th Percentile Method is not merely arbitrary and scientifically unfounded. It also ignores the safety and wellbeing of most people on or in the area of the public right of way. In affording the lawbreaking minority the power to raise speed limits, it overrides the interests of the 85 percent of motorists who are traveling more slowly (many or most of them obeying the law); the interests of passengers who do not wish for the probability and magnitude of potential injuries to themselves to increase; the interests of roadworkers and police officers, who must contend with the elevated risks of raised speed limits without any corresponding benefit—and most of all the interests of people walking, biking, and using wheelchairs in or adjacent to the right of way, whose interests are systematically excluded by the 85th Percentile Method. As has been documented voluminously, the lives taken by dangerous drivers are far likelier to be African-American, Latino, indigenous, low-income, or belong to people with disabilities or children than the general population.¹⁴ The 85th Percentile Method is unworthy of the FHWA’s imprimatur.

(3) The Proposed MUTCD Prizes Uniformity Over Innovation

The Proposed MUTCD states that it aims to “[p]romote national uniformity in the meaning and appearance of traffic control devices.” But in many cases, total uniformity has precluded flexibility and innovation. If deviations from the rules require permission or an engineering study, it becomes a more expensive and more time-consuming process to innovate. And if too many practices are prohibited, creativity is effectively prohibited as well.

Moreover, uniformity primarily inures to the benefit of drivers, as it allows them to instantly recognize signs and road markers without having to slow down. When combined with the MUTCD’s other provisions, which prioritize high “levels of service” for motorists, uniformity has the effect of encouraging cars to move quickly, to the detriment of other roadway users. The MUTCD needs to provide guidance that will work for all roadway users and recognize that, in some instances, slowing down traffic by introducing novel features may actually be a good thing.

For example, with uniformity as the rationale, the Proposed MUTCD¹⁵ requires that crosswalks be white. Yet the reality is that creating variety in crosswalks actually slows drivers, which improves safety. Moreover, colorful crosswalks can create a sense of place and enliven a streetscape. Yet cities that have tried to implement such features are not in compliance with the MUTCD, and may be subject to legal liability for daring to deviate.

The FHWA has requested comment on colored crosswalks and how they would “maintain the uniformity and recognition of crosswalk markings,” with comments to be supported by “quantifiable and objective data.” But if these practices have not been allowed, how can empirical studies be carried out to provide quantifiable data? This is one illustration of how focusing on uniformity makes it difficult to explore new practices and inhibits the development of more pedestrian friendly measures.

We urge the FHWA to rework the MUTCD to prioritize flexibility and innovation over uniformity. Localities should be given the latitude to experiment with new designs for their communities, while still complying with the MUTCD.

¹⁴ See, e.g., SMART GROWTH AM. & NAT’L COMPLETE STS. COAL., DANGEROUS BY DESIGN 17 (2019), <https://smartgrowthamerica.org/app/uploads/2019/01/Dangerous-by-Design-2019-FINAL>.

¹⁵ Section 3B.18.

(4) The Proposed MUTCD Does Not Reflect Diverse Values

The Proposed MUTCD fails to reflect a diverse set of values and ideas about who roads are for, and how they should be designed. In the first section, the Proposed MUTCD “presumes sufficient working knowledge, professional training and experience, and education in the principles of engineering.” While the Proposed MUTCD purports to be an engineering document, its impact is far-reaching and affects all Americans. It codifies important policy choices and should serve the interests of all Americans, not primarily advance a narrow, dated 20th-century vision of fast automobility.

We believe a key issue is the composition of the committee drafting the MUTCD, the National Committee on Uniform Traffic Devices (“NCUTCD”). It must reflect more types of road users, not just drivers. Indeed, we note that 100,000,000 (about 1 in 3) Americans lack a driver’s license and thus are legally unable to even *be* drivers. The current process for serving on the NCUTCD presents barriers to participation by diverse parties: Individuals must be selected by an eligible sponsoring organization, most of which focus on transportation and roadway expertise.

Diversifying expertise by creating a multidisciplinary committee result in a set of more well-rounded regulations. Transportation accounts for 29% of U.S. greenhouse gas emissions according to the U.S. Environmental Protection Agency, so environmental experts should have a seat at the table. These same emissions, as well as the lack of pedestrian access to roadways, are clearly public health issues, but there is currently no guaranteed public health representation on the committee. These are just two examples of additional expertise that is necessary.

Diversifying representation of the concerns of low-income and minority groups would also foster good rule-making. The MUTCD has had unforeseen disparate impacts on these groups, because the road designs it dictates has facilitated the selective, discriminatory enforcement of traffic laws. For example, *The Seattle Times* recently reviewed jaywalking tickets issued by the Seattle Police from 2010 to 2016. Over this period, the percentage of tickets issued to Black residents never went below 20% and in 2016, 28% of citations were issued to Black residents, who represented only 7% of Seattle’s population. Going forward, the drafting committee should include more diverse input to prevent these kinds of negative impacts.

We also note that individual members have sometimes wielded their technical authority for narrow ideological purposes. Illustrating the point, one member of the NCUTCD recently accused Americans participating in the legally-mandated Proposed MUTCD administrative comment process of engaging in “political maneuvering” and “cancel-culture.”¹⁶ We believe that changes to the composition of the NCUTCD, facilitated by FHWA, or a new, more diverse official advisory committee developed by the FHWA, could ensure that people writing our rules embrace a more inclusive, broad-minded vision of the document. This would allow us to not only build back our roads, but build them back *better*.

We also believe that opening discussions to the public, rather than holding sessions behind closed doors, could help with transparent, sound decision-making. Such transparency may be facilitated if the official advisory committee is subject to the Federal Advisory Committee Act.

¹⁶ Jessica Wehrman, *A Traffic Manual “to Fall Asleep by” Stirs Road Rage*, ROLL CALL, Apr. 5, 2021, <https://www.rollcall.com/2021/04/05/a-traffic-manual-to-fall-asleep-by-stirs-road-rage/>.

In the rewrite, we ask that the FHWA harness the expertise of a diverse array of road users and community stakeholders and protect values on which there is widespread agreement, such as safety, prosperity, and equity.

(5) The Proposed Chapter Concerning Automated Vehicles Should be Stricken

Science promises a future free of traffic accidents.

THE ELECTRIC HIGHWAY. Cars using this expressway ‘hook-in’ to an electronic beam, which controls speeds, prevents accidents.

THE JAM-PROOF EXPRESSWAY. Through-city freeways . . . speed cars to their destinations, ending traffic jams.

THE AIR CAR. A car without wheels rides on a cushion of air, achieving great speeds with unexcelled safety features.

The above slogans appear in an advertisement placed by O.D. “Mike” Shipley, Commissioner of Traffic Safety for the Commonwealth of Pennsylvania. The year: 1961.¹⁷

The Proposed MUTCD includes a new chapter, Part 5, concerning automated vehicles. Despite being written sixty years after the promise of a “jam-proof expressway,” it remains premature. Part 5 should be stricken from the Proposed MUTCD.

With a prototype of the automatic transmission having been completed in 1921,¹⁸ we are now arguably in the 101st year of the quest to automate driving. At this stage, automated vehicles (“AVs”) that are safe for public roads remain an unproven, experimental technology. In 2015, Tesla CEO Elon Musk predicted “complete autonomy in approximately two years.”¹⁹ Six years later, it has not arrived. But hyping a sexy new technology as a way to distract from its failures is a habit that extends far beyond any one automaker.

In the twentieth century, the American city was rebuilt in the image of the automobile—then an ascendant transportation technology. This choice displaced hundreds of thousands of Americans and supercharged racial segregation and health disparities that continue to this day. Indeed, as Secretary Buttigieg has said, “there is racism physically built into some of our highways.”²⁰ The limitations of automated vehicles are poised to aggravate, not ameliorate, these problems.

¹⁷ Pittsburgh Post-Gazette, July 30, 1961. This ad was issued by the Governor’s Highway Safety Program of the Commonwealth of Pennsylvania and appeared in multiple newspapers. *Id.* The authors thank Peter Norton, who unearthed this advertisement, for making it available for our research.

¹⁸ See Hearst Autos Research, *What Is an Automatic Car?*, CAR AND DRIVER, <https://www.caranddriver.com/research/a31884931/what-is-an-automatic-car/>.

¹⁹ Fred Lambert, *Tesla CEO Elon Musk Drops His Prediction of Full Autonomous Driving from 3 Years to Just 2*, ELECTREK, Dec. 21, 2015, <https://electrek.co/2015/12/21/tesla-ceo-elon-musk-drops-prediction-full-autonomous-driving-from-3-years-to-2/>.

²⁰ Corinne Grinapol, *Biden Administration Seeks to Address the Interstate Highway System’s Racist Past*, ENGINEERING NEWS-RECORD, Apr. 15, 2021, <https://www.enr.com/articles/51593-biden-administration-seeks-to-address-the-interstate-highway-systems-racist-past>.

At the present time, AVs are very technically constrained in where and under what conditions they can operate safely.²¹ They require extremely expensive equipment. They rely on machine-learning and artificial intelligence technology whose algorithms have been shown to develop racial biases. Experts predict that if commercialized, they would substantially increase vehicle miles traveled, especially in cities—the very places that already suffer from elevated levels of pollution and traffic violence because of the transportation policy decisions of the past. Even their potential to eliminate crashes by eliminating driver error has been shown to be limited.²²

Pronouncements of AV car executives have confirmed the limitations of AVs. A senior executive at Volkswagen has warned of the astronomical costs of truly effective self-driving cars, observing that “the complexity of solving this problem is like a manned mission to Mars” and predicting that full self-driving capability, known as Level 5, “will never happen globally.”²³ In 2018, the CEO of Waymo, a leading driverless car company, expressed similar skepticism about the potential for truly autonomous Level 5 cars.²⁴ In 2019, another self-driving car company CEO and robotics professor went further, estimating that autonomous vehicles were then “0.01% as good as humans,” and that even if their performance *doubled* every 16 months, parity would not arrive until 2035.²⁵

While the AV industry as a whole has become more measured in its predictions, Part 5 of the Proposed MUTCD would have cities rebuild their streets for AVs anyway. It urges cities and states to widen their roads and make other changes that make roads more dangerous to vulnerable users solely for the purpose of accommodating a technology that remains experimental. When the MUTCD is rewritten, a new Part should be drafted that addresses AVs while elevating safety, sustainability, and fairness above the profits of AV companies and the comfort and convenience of their privileged owners.

* * *

In sum, the FHWA has an opportunity to shift the framework of the MUTCD and to produce scientifically grounded, inclusive, and equitable regulations that protect all roadway users and their surrounding communities. In addition to our comments, we encourage the FHWA to take seriously the technical suggestions of the National Association of City Transportation Officials, the Institute of Transportation Engineers, and Toole Design. We urge the FHWA to go back to the drawing board and draft a fresh document that prioritizes complete streets, safety, and inclusion.

²¹ See, e.g., Eric Adams, *Why We're Still Years Away from Having Self-Driving Cars*, VOX, Sept. 25, 2020, <https://www.vox.com/recode/2020/9/25/21456421/why-self-driving-cars-autonomous-still-years-away>.

²² See INSURANCE INSTITUTE FOR HIGHWAY SAFETY, SELF-DRIVING VEHICLES COULD STRUGGLE TO ELIMINATE MOST CRASHES, June 4, 2020, <https://www.iihs.org/news/detail/self-driving-vehicles-could-struggle-to-eliminate-most-crashes>.

²³ Edward Taylor, *VW Says Driverless Vehicles Have Limited Appeal and High Cost*, REUTERS, Mar. 5, 2019, <https://www.reuters.com/article/autoshow-geneva-autonomous-electric/vw-says-driverless-vehicles-have-limited-appeal-and-high-cost-idUSL5N20S64F>.

²⁴ WALL ST. J., *Tech D.Live: Are We There Yet? The Future of Driverless Cars* (Podcast), Nov. 14, 2018, <https://www.wsj.com/podcasts/wsj-the-future-of-everything/wsj-tech-dlive-are-we-there-yet-the-future-of-driverless-cars/a0c1b34e-fe21-4c19-8b98-8e74b0c0643f> (around 3:30 mark) (acknowledging weather and geography as difficult, sometimes insuperable, constraints, and stating, “I’m not sure [the industry is] ever going to achieve an L5 level of automation...It’s important, I think, for all of us to be really clear on the language around self-driving...”).

²⁵ See, e.g., Edwin Olson, *The Moore’s Law for Self-Driving Vehicles*, MEDIUM, Feb. 27, 2019, <https://medium.com/may-mobility/the-moores-law-for-self-driving-vehicles-b78b8861e184> (calculating improvement at rates that double performance every 16 months).

Thank you for considering our views.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Sara C. Bronin', with a stylized, flowing script.

Sara C. Bronin
Thomas F. Gallivan Chair in Real Property Law
at the University of Connecticut School of Law

A handwritten signature in black ink, appearing to read 'Gregory H. Shill', with a stylized, flowing script.

Gregory H. Shill
Associate Professor of Law at the University
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Advanced Driving Simulator